

**Trinity River (18010211), South Fork Trinity River (18010212), & Lower  
Klamath River (18010209) Watershed Nomination**

**303(d) listing of HUC 18010211/18010212 for Sedimentation & Temperature  
Environmental Protection Agency  
Targeted Watershed Grants Program**

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**Submitted to:**

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I. **Abstract:** The Trinity and lower Klamath River system once teemed with bountiful runs of salmon and steelhead, which have since declined due to damming of the upper watershed, water diversions, and land management activities that have resulted in degraded watershed conditions. The projects in this nomination package attempt to address the issues affecting the fisheries resources of the Trinity and Lower Klamath watershed by relying upon the knowledge that has been cultivated through extensive studies and partnerships. Components of the restoration plan for the watershed, which are contained within the 2000 Record of Decision for Trinity River Mainstem Fishery Restoration, include mandated annual instream flows, physical channel rehabilitation, sediment management, watershed restoration, monitoring, and infrastructure improvements. The projects in this nomination will contribute toward the rehabilitation, sediment management, and watershed restoration components of the Trinity River Restoration Program which have not been adequately addressed due to funding shortfalls.

## **II. Project Description**

**A. Introduction:** The Trinity River watershed is the largest tributary of the Klamath River, encompassing 2,950 square miles. Its headwaters begin 9,000 feet in elevation within the California Coastal Range, flows 172 miles to its confluence with the Klamath River at Weitchpec, continues out to sea through the Yurok Reservation, and meets the Pacific Ocean at Requa 43 miles downstream of its confluence with the Klamath River. The principal anadromous fish species within the Trinity River system have been Chinook salmon (*Oncorhynchus tshawytscha*), Coho salmon (*Oncorhynchus kisutch*), Steelhead (*Oncorhynchus mykiss*), and green sturgeon (*Acipenser medirostris*).

The fisheries resources of the Trinity River have been an integral component of the lives of Tribal People since time immemorial; for subsistence, ceremonial, religious, and commercial purposes. It has been estimated that nearly 10,000 inhabitants of the Klamath and Trinity watersheds consumed more than 2 million pounds of salmon annually from runs exceeding 500,000 fish before European contact (D. R. Hoptowit). Fishery resources of the area have been characterized as “not much less necessary to the existence of the Indians than the atmosphere they breathed.” *Blake v. Arnett*, 663 F.2d 906, 909 (9<sup>th</sup> Circuit) (Department of Interior, ROD)

While Yurok People have inhabited the Lower Klamath River for longer than can be remembered, their Tribal Government was not formally organized until 1993. In light of the importance of Klamath fisheries resources, the first major department to be developed within the Tribe was the Fisheries Program, which has grown to include 16 fisheries biologists and dozens of technicians. Shortly thereafter, a partnership was developed between the Yurok Tribe, Green Diamond Resource Company and the California Coastal Conservancy to restore the watersheds of the Lower Klamath Sub-basin.

In 1955, Congress authorized construction of the Trinity River Division (TRD) of the Central Valley Project by the Bureau of Reclamation. With its construction, the TRD not only eliminated 109 miles of important salmonid habitat above Lewiston Dam, but has annually exported 70%-90% of the river's natural flows at Lewiston for use in the Central Valley. Chinook and coho salmon and steelhead trout declined drastically as a consequence of decreased river flows. The river has experienced loss of habitat related to the loss of flushing flows, riparian encroachment, poor water quality conditions due to sediment loading into the river, and temperatures reaching near lethal levels for salmonid species, especially in the lower Trinity and Klamath rivers during late spring, summer and fall.

Comprehensive analyses of ecologic conditions in the Trinity are presented in Trinity River Flow Evaluation Final Report (U.S. F&WS and Hoopa Valley Tribe, 1999), and the Trinity River Mainstem Fishery Restoration EIS/EIR. The Flow Evaluation Report recommends, and the EIS/R proposed, reinstitution of ten "healthy alluvial river attributes" in the Trinity, through increased flows and flow rates, mechanical channel manipulation, gravel-replenishment actions, and fine-sediment-reduction through watershed restoration, all conducted under a formal Adaptive Management Program to restore maintain the natural production of anadromous fish on the Trinity River mainstem. The Record of Decision (ROD) was signed on December 19, 2000.

The ROD incorporates the recommendations developed in the Trinity River Flow Evaluation Report, as well as additional watershed protection efforts identified in the Mechanical Restoration Alternative of the EIS/EIR. The Trinity ROD has been the subject of much litigation. In July 2004, the Ninth Circuit ruled that the ROD may proceed. Again in November 2004 the Ninth Circuit of Appeals reaffirmed their decision by stating that "Nothing shall remain in the way of implementing the Trinity River ROD".

Within the South Fork Trinity River (SFTR), there are numerous plans and assessments dealing with restoration and water quality. These include the Action Plan for the Restoration of SFTR Watershed and its Fisheries which contains a summary of known resource conditions and constraints, the SFTR Sediment Total Maximum Daily Load (1998), which addresses sediment loading in the entire SFTR basin, and the South Fork Trinity River Water Quality Monitoring Project (2003), which updated the TMDL assessment through a CWA 205(j) grant.

The Lower Klamath Sub-Basin Restoration Plan strives to protect and restore existing healthy areas first, improve stream and riparian habitats in priority watersheds, and provide job training and quality employment opportunities for Tribal members. The lower Klamath sub-basin is owned in majority by private industrial timber. The Yurok Tribe has been part of a unique partnership with Green Diamond Resources Company in addressing “legacy” sediment problems pro-actively. We feel this approach embraces the market-based incentive goals of the targeted watershed program in that the company, by contributing to upslope restoration in the short-term, will see stronger returns in the future when faced with the existing framework of regulation and required mitigation.

## **B. Description of the Proposed Projects**

**Yurok:** The Lower Klamath River Sub-Basin Watershed Restoration Plan identified Terwer Creek as one of the highest priority streams for restoration based on watershed condition and the presence of persistent salmonid populations (Gale and Randolph 2000). Chronic streambed sedimentation, heavily degraded instream and riparian habitat, and loss of habitat connectivity were identified as the major factors currently limiting salmonid populations in this watershed (Gale and Randolph 2000).

The Yurok Tribal Fisheries Program (YTFP) and the Yurok Tribal Environmental Program (YTEP) initiated a monitoring program in 1996 to document baseline physical and biological conditions to allow the Tribe to assess changes resulting from land management and restoration activities in the watershed. To address upslope concerns, The Yurok Tribal Watershed Program (YTWP) recently finalized a road system inventory of the watershed that prioritized treatment of all potential sediment delivery sites and is slated to begin decommissioning high priority road segments in 2005. To address instream and riparian impairments, YTFP began implementing stream bank stabilization and riparian enhancement projects in lower Terwer Creek in 2004.

The Yurok Tribe is proposing a multi-phase restoration project that will include: decommissioning of high priority road segments and stream crossings in upper Terwer Creek and stream bank stabilization and riparian restoration in lower Terwer Creek. The project would also fund monitoring components that will provide the quantitative means to assess short and long-term effectiveness of restoration efforts in this watershed.

The proposed project will address long-term goals including: reducing the amount of sediment delivered to critical salmonid habitats, increasing the amount of instream large wood and enhancing future recruitment potential, improving salmonid spawning and rearing habitats. Specifically, the project will result in the following:

- Decommissioning of 1.1 miles of high priority roads and rehabilitation of 18 upslope sites to prevent delivery of current and future sources of sediment to salmonid habitat;
- Stabilization of nearly 1,000 feet of highly erodable stream banks through placement of large wood and live willow siltation baffles;
- Planting of 200 Cottonwood, 200 Big-leaf Maple, and 400 native conifers in riparian areas to increase habitat complexity and promote future large wood recruitment; and

- Provide funding to maintain watershed level monitoring components that allow the Yurok Tribe to assess effectiveness of proposed watershed restoration.

Detailed project tasks:

**Task 1 – Upslope Restoration (Total Project Cost \$210,000)**

Site layout and planning for upslope restoration will be conducted in May 2006. Road decommissioning, rehabilitation of select sites, and removal of stream crossings will be conducted from June through November 2006. A project report for this specific component will be developed during November and December 2006.

**Task 2 – Instream and Riparian Restoration Component (Total Project Cost \$90,000)**

Riparian condition assessments and photographic monitoring will be conducted throughout the project area in early August 2006 and 2007. Treatment of eroding banks, construction of willow baffles, and removal of exotic vegetation will be conducted in late August 2006 through February 2007. Riparian planting will be conducted in mid-November 2006 through February 2007. A project report for this specific component will be developed during August and September 2007.

**Task 3 – Effectiveness Monitoring (Total Project Cost \$50,000)**

A staff plate will be installed in lower Terwer Creek in May 2006 and will be monitored, along with the permanent gage located upstream, from October 2006 through September 2007. A turbidity monitoring station will be established at the gage location in October 2005 and monitored from October 2005 through September 2007. Macroinvertebrates will be collected at sites in lower Terwer Creek in May 2006 and May 2007 with data analysis occurring from June 2006 through December 2007. Data management and analysis of all monitoring components

will occur from October 2005 through December 2007. A project report for this specific component will be developed by December 2007.

The project is consistent with the CA Department of Fish & Game's "Recovery Strategy for CA Coho Salmon" recommendations: KR-KG-07, 08, 08b, 12, 13, 14. This project also addresses habitat restoration recommendations in the Steelhead Restoration and Management Plan for California.

**Trinity County:** The proposed Indian Creek Rehabilitation Project will consist of clearing vegetation, removing sediment, reshaping the river channel, constructing a side channel and revegetation. The primary purpose of the proposed project is to allow full release of Trinity ROD flows and to provide increased salmonid rearing habitat. The project is a continuation of existing efforts to remove floodplain obstructions to allow higher fishery flows through replacement of existing bridges and other floodplain structures. Reinitiation of historic alluvial processes through higher flows, channel manipulation and ongoing/proposed work in adjacent watersheds to reduce sources of fine sediment to the mainstem are cumulatively expected to improve habitat for salmonids and other species, as well as decrease flood risks to structures, which allows the higher flows to be released on a perpetual basis without ongoing mechanical maintenance. The proposed project will also accomplish the following goals:

- Removal of riparian vegetation and berms to allow the river to flow within its historic alluvial floodplain.
- Bank-feathering along the river's edge to provide low flow zones for juvenile salmonid rearing habitat while reducing the channelization of the river.
- Removal of in channel sediment accumulation to increase the carrying capacity of the river and minimize impacts to human improvements.



Detailed project tasks:

TASK 1: Complete NEPA/CEQA documentation and engineering designs (BOR) at a cost of \$400,000 by May 2006.

TASK 2: Complete Trinity River Bridges by September 30, 2005, costing \$6 million.

TASK 3: Permitting. Obtain all necessary permits and any necessary right-of-ways.

Landowners will have been contacted regarding right-of-ways and access and temporary construction easements will be acquired by May 2006, the cost of which is included in task 1.

TASK 4: Develop, advertise, award, and execute a construction contract by June 2006.

TASK 5: Administer construction contract and oversee to completion. Activities include vegetation removal, riparian berm removal, stream crossings, side channel construction, mainstem channel excavation, material transportation, material stockpile and disposal, and revegetation which will take place from July 2006 to October 2007 at a cost of \$2,369,000.

TASK 6: Physical habitat will be surveyed to quantify physical changes over time. The project is consistent with the CA Department of Fish & Game's "Recovery Strategy for CA Coho Salmon" recommendation TR-HU-01, the Mainstem Trinity River Watershed Analysis, and the Trinity River ROD. This project, to be implemented by BOR's Trinity River Restoration Program, will address the Clean Water Act 303(d) listing for sediment and temperature by allowing higher flows to occur that will bring water temperatures down and mobilize sediment to create an alluvial river once again. This project will primarily be a collaborative effort between the Trinity River Restoration Program and Trinity Management Council members which is made up primarily of staff from DWR, CDFG, USFWS, NOAA Fisheries, Trinity County, USFS, Hoopa Valley Tribe, and the Yurok Tribe.

**TCRCD:** The South Fork Trinity River Watershed Restoration project will decommission 5 miles of extremely high aquatic risk road in the Hidden Valley Watershed of the SFTR, including several “triple-stacked” stream crossings on Swift Creek, and permanently eliminate all potential controllable sediment delivery of 27,000 cubic yards at 33 high-risks stream crossings, and reduces road densities by nearly 50% within the 3.2 square mile project area. These roads are located on USFS lands within the lower slope of the inner gorge of the South Fork, an area classified with the highest erosion rating in the SFTR Basin.

The project will be accomplished by these specific tasks detailed below:

- Planning/Contracting: Detailed implementation plan(s) will be prepared for use in contract documents; roads will be stationed and staked with edge of cut stakes clearly defining work areas and photo points established.
- Project Implementation: The South Fork of the Trinity River, due to various wildlife concerns, has a Limiting Operating Period (LOP) designated by the USFS. Certain work, including road decommissioning must take place between July 10 and October 15, in a given year. Work with a qualified contractor would begin during this limited window under the direct supervision by TCRCD staff. All streams, swales, seeps and springs will be completely excavated to expose natural stream channels buried during road construction. Any trees and brush removed during construction activities will be stockpiled and placed cross- slope atop finished slopes. Excavated road fill will be end hauled to a safe disposal area in most cases adjacent roadways or landings. Any crossings with active stream flow will be temporarily diverted around work area to minimize any short term water quality impact. Water turbidity will be monitored downstream of project area. All culverts excavated will be removed from public lands.

- Revegetation: All stream, swale, seeps and springs excavated will be seeded with native grass seed, mulched and revegetated with riparian species. The number of plantings/stakings will be sufficient to revegetate excavated channel and sideslopes. Any disturbed area that has no potential to deliver sediment to a watercourse will be seeded with native grass and forbs, not mulched.

This project will start in the spring of 2006 and a final report prepared by Spring 2008, providing time for two implementation seasons, July 10 through October 15.

The cost of implementing this project is \$275,000 as depicted in the attached budget, with \$168,172 to be for subcontracted equipment operators. Cost Share from California Fish & Game for South Fork Trinity River Watershed restoration is \$92,000.

Milestones and dates for this project include: Subcontract awards by July 10, 2006 and 2007; As-built photo documentation by November 2006 and 2007; Monitoring 1 year following implementation.

Monitoring elements include taking post project calculations of sediment removed from crossings. Permanent photo points will be established at each site and will document changes over the course of the project. About 1 year later, randomly selected sites will be revisited to document and measure overall project effectiveness, including post excavation stream channel adjustments, side slope adjustments, revegetation success and to reoccupy established photo points. Revegetation success will be measured by coverage by herbaceous forbs and woody species growth and survival.

Expected environmental outcomes include reduced sediment to the South Fork Trinity River, with a total 27,000 cubic yards removed from 33 high risk crossings. Post-implementation calculations of sediment volumes removed from crossings will be completed. These volumes

represent real, sediment delivery reductions. In the long-term, attainment of TMDL targets would be the measure of success.

This project is consistent with and supports EPA's Sediment TMDL for the South Fork Trinity River and supports the Aquatic Conservation Strategy of the Northwest Forest Plan, the Watershed Restoration component of the Record of Decision for Trinity River, and the support that the Trinity County Resource Advisory Committee has placed on sediment reduction in the SFTR, as well as the 5-County Coho Plan. Funding/partnerships for work in this watershed includes Fish and Game, Trinity County Resource Advisory Committee, Bureau of Reclamation, State Water Resources Control Board/North Coast Regional Water Quality Control Board, Natural Resources Conservation Service, and US Forest Service.

### **C. Description of Outreach Activities**

Outreach activities for this project will consist of a variety of means by each partner. Trinity County will provide outreach for theirs and their partner's projects via a list serve that has over 200 subscribers, as well as making press releases for their individual project. Affected landowners have and will continue to be contacted directly. Trinity County Resource Conservation District would provide outreach in newsletter articles about theirs and their partner's projects in the RCD quarterly newsletter (the Conservation Almanac), provide information on their website, and also have press releases about their individual project. The Yurok Tribe will demonstrate the successes of the various projects through its website, newsletter, press releases and presentations at EPA and other appropriate conferences. If and when the proposal is accepted, a press release to all local media within the Northcoast region will be released to inform the public about all of the projects and the financial support for the continued restoration of the Trinity River by the US EPA.

## II. Budget

Table 1.—Budget Information—EPA Targeted Watersheds Grant Program \1\

<b>Watershed Project, Activity or Work Plan Element</b>	<b>Federal</b>	<b>Non-Federal</b>	<b>Total</b>
<b>SECTION A—BUDGET SUMMARY</b>			
1. Yurok	\$ 350,000	\$ 400,000	\$ 750,000
2. TC Indian Creek Rehabilitation	\$ 275,000	\$ 2,500,000	\$ 2,775,000
3. TCRCD South Fork Trinity River Restoration	\$ 275,000	\$ 92,000	\$ 367,000
4. ....	.....	.....	.....
Totals.....	\$ 900,000	\$ 2,992,000	\$ 3,892,000

\1\ Excerpted from Standard Form 424A, OMB Circular A-102.

<b>Watershed Project, Activity or Work Plan Element</b>				
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Total				
Budget Categories	(1)	(2)	(3)	(4)
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<b>SECTION B—BUDGET CATEGORIES</b>				
	Yurok	Trinity County	TCRCD	
a. Personnel	\$ 100,000		\$ 37,510	
b. Fringe Benefits	\$ 33,000		\$ 20,625	
c. Travel	\$ 6,500		\$ 3,531	
d. Equipment	\$ 105,000			
e. Supplies	\$ 12,500		\$ 3,807	
f. Contractual	\$ 45,000	\$ 233,750	\$ 168,172	
g. Construction	\$			
h. Other	\$ 2,039		\$ 5,485	
i. Total Direct Charges				
(sum line a-h)	\$ 304,039		\$ 239,130	
j. Indirect Charges	\$ 45,961	\$ 41,250	\$ 35,870	
Totals (sum line i-j).....	\$ 350,000	\$ 275,000	\$ 275,000	
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### (b) Matching Requirement.

Applicants must demonstrate a minimum non-Federal match of 25% of the total cost of the project or projects.

The Yurok's, Trinity County's, and TCRCD's funding match is from various programs provided by the California Department of Fish and Game, Green Diamond Resources Company and various compact funds which are eligible as non-federal match.

### **III. Appendices**

#### **A. Experience in Grant Management**

The Yurok Tribe will act as the fiscal manager for this award. The Tribe has successfully managed a multitude of EPA grants and cooperative agreements since 1996 (e.g. CWA106,319,104(b)(3), CAA, GAP, PWSS, FIFRA). The Yurok Tribe Environmental Program entered into a Performance Partnership Grant with EPA in 2002 and has demonstrated the capacity and commitment to produce environmental results and fiscal accountability necessary to carryout this proposal with our partners.

**Trinity County:** The Trinity County Planning Department, Natural Resources Division has been performing and coordinating fishery restoration and construction projects for 17 years. Principal Planner Tom Stokely has been representing the County for Trinity River Restoration Program projects since 1988 and continues to serve as an integral part of many of the Program's Projects. The County served as the lead agency under CEQA for the EIR/EIS for Trinity River Mainstem Fishery Restorataion, the SEIS/EIR, and the EA/EIR for the Trinity River Bridges Project. He serves as Trinity County's alternative on the eight member Trinity Management Council.

**TCRCD:** The Trinity County Resource Conservation District (TCRCD) has significant experience managing grants and implementing watershed restoration projects through 15 years of road upgrade and decommissioning experience. Since 1996, in cooperation with the USFS, and the South Fork CRMP, the TCRCD has been working on watershed restoration projects in the South Fork of the Trinity River such as road inventories, road upgrades, and decommissioning that has cumulated into 26 miles of road decommissioning, excavating 130 Stream crossings, and 146 miles of road storm-proofing in the South Fork of the Trinity River.

### **Cited Informational Sources**

Department of Interior, ROD; 2000 Record of Decision, Trinity River Mainstem Fishery Restoration: Final Environmental Impact Statement/Environmental Impact Report, December 2000

R. Hoptowit, Klamath-Trinity Salmon Restoration Project, California Resources Agency (Sept. 1980) at 12-13 and n.26. This estimate includes 3,100 Yuroks, 2,000 Hupa and 2,700 Karuks. S.F. Cook, "The Aboriginal Population of the North Coast of California," University of California Anthropological Records, 16 No. 3 (1955: rpt. New York: Kraus Reprint Co., 1976) 84, 98, 100. Another source estimated the Yurok population in excess of 2,500 and perhaps greater than 5,000. S. Powers, Tribes of California, cc 4 and 5, published as 3 Contributions to North America Ethnology at 59 (1877). U.S. Dept. on Interior, *Environmental Impact Statement—Indian Fishing Regulations 2* (Hoopa Valley Reservation, California (July 1987)).

Gale, D.B., and D.B. Randolph. 2000. Lower Klamath River sub-basin watershed restoration plan. Yurok Tribal Fisheries Program, Klamath, CA.